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# The Cuban Missile Crisis: A SIGINT Perspective

#### DONALD C. WIGGLESWORTH

Editor's Note: This manuscript was written by Donald Wigglesworth in the winter of 1984-85. While his description of the use of score in this crisis remains of real value to the cryptologic community. Dr. David Hatch of the Center for Cryptologic History has deleted some of Mr. Wigglesworth's comments concerning Soviet motivations in the crisis and Soviet-Cuban relations. The past decade has seen the declassification and release of copious amounts of information from both the U.S. and Soviet sides concerning the missile crisis, prompting a reevaluation of that period, and the indications are that this process of revelation and reevaluation will continue into the foreseeable future.

Against a background of increasing Soviet/American cold war tensions and diplomatic disputes, in January 1961 John F. Kennedy was inaugurated president of the United States. The following April he approved for implementation an aggressive CIA plan – one that was to cause him many difficulties. Its purpose was to overthrow the Castro regime in Cuba. The plan proposed the invasion of the southern coast of Cuba at Bahia de Cochinos (Bay of Pigs) using anti-Castro Cubans trained by CIA.

The failure of the Bay of Pigs project was tragic not only for the casualties and captured but also for the image of the new administration, particularly with reference to its relations with the Soviet Union. From a SIGINT viewpoint, however, it was not a total failure.

(b)(1)<sup>7</sup> (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36

An unfortunate consequence of the Bay of Pigs defeat was that it moved Castro even closer to Moscow, leading him to seek greater Soviet and Soviet Bloc support for his ailing regime. Cuba also badly needed economic as well as military aid; it had either to increase its exports or to secure outright gifts from other nations. A country with few natural resources, Cuba depended primarily on its sugar cane crop as a trade resource. Because the United States, traditionally its biggest customer, had drastically curtailed its purchases of Cuban sugar, Castro had only the Soviet Union and its satellites to turn to for support.

To further complicate the Kennedy administration's foreign relations problems, the Bay of Pigs fiasco coincided with the Soviets' consistent efforts to conclude a treaty of peace with Germany, a peace that could include, in their view, the evacuation of that portion of Berlin still occupied by the British, French, and Americans. It was generally accepted at the time that Soviet premier Khrushchev's plan to provide extraordinary support to Cuba,

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to include defensive and offensive weapons and weapon systems of advanced design, was related to his desire to gain improved leverage diplomatically in his efforts to evict the Western Allies from West Berlin. Sources available over the past decade from the former Soviet Union now indicate that Khrushchev's decision to put offensive weapons into Cuba was unrelated to the Berlin crisis, but it was an attempt to alter at a stroke the strategic balance between the superpowers.

(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36

(b)(1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36 Before 1961 intelligence interest in Cuba was insignificant; the island simply was not a threat to the security of the United States. Other than its sugar trade, it contributed little to the world economy. Its communist dictator was viewed as just another among many rightist and leftist autocrats who have dominated Central and South American politics for four centuries. Further, from a SIGINT viewpoint, such interest as did exist was Vint Hill Farms Station, Warrenton, Virginia (USM-1), material to About intercept positions and processing people (b)(3)-P.L. 86-36 were allocated to the Cuban problem. Almost coincident with the Bay of Pigs venture were (b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36 in the spring of 1961 Soviet and Soviet Bloc radar emissions appeared in the signals environment.5 Marine Corps airborne reconnaissance first identified Soviet Firecan mobile fire control radars at two points in Cuba on 21 June. This radar was used in antiaircraft guns. This advanced technology now conjunction with either being employed by the Cubans (b)(3)-50 USC 403 (b)(3)-P.L. 86-36 Unfortunately, these changes occurred at a time when consumer interest in Cuba had skyrocketed.6 But the SIGINT community was in a time of rapidly growing intelligence need. Given the worldwide political change because of decolonization and an increase in anti-Western feeling, it had become increasingly evident that in order to maintain an adequate collection posture around the world, NSA had to become flexible in seeking collection alternatives. The choices decided on were (1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36 and (3) to develop both airborne (Airborne Collection Reconnaissance Platforms - ACRPs) and seaborne (Technical Research Ships - TRSs) collection platforms. Plans along several of these lines had proceeded towards implementation when the Cuban priority intelligence requirement surfaced. These programs were in various stages of implementation when enhanced Cuban requirements were levied on the Agency. Before NSA could determine the additional resources to be applied to Cuban targets, it

(b)(3)-50 USC 403 (b)(3)-P.L. 86-36

en made over Cuba via airborne colle	ectors	Also, in July 1960 had	(b)(1) (b)(3)-50 USC 40 (b)(3)-P.L. 86-36
cumnavigated the island testing the	environment.	was the site of a similar	, , , ,
st.7 However, these efforts all occurr		of the very high level of	
erest in Cuban intelligence by U.S. n	ational policymakers.		
Following the Bay of Pigs invasion,	, hearability test efforts re	ceived priority attention	
NSA.			(b)(1) (b)(3)-50 USC 40
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<del></del>	When the results of the tes	t were evaluated in July	4
62, it was determined that while the		, 5	
mals were not. <sup>8</sup>	,		
Concurrently with the developmen	t of haarahility plans in th	na later months of 1061	
e USS Oxford, the first of the sea		-	
akedown cruise. <sup>9</sup> It departed Norfol			
e Caribbean area.	•	•	
The Oxford (the former USS Samu	el Aitken) was a WWII Li	herty-type freighter that	
d been mothballed to the Wilmingto		• • • •	
GINT community's TRS seaborne pro			
en extensively rehabilitated and gi	ven a sophisticated colle	ection package so that,	
rtunately, it was ready for operations	at the time the Cuban requ	uirement surfaced.	
The Oxford's shakedown cruise in	the Caribbean was a su	ccess. Not only did it	
entify a number of valuable technic			
eration of the ship's electronic interce		on made), but it collected	
			(b)(1) (b)(3)-50 USC 40
substantial number of signals of inter			(b)(3)-50 USC 40 (b)(3)-18 USC 79
ansmissions, as well as voice interc	epts on more than fre	quencies. Although the	(b)(3)-50 USC 40
ansmissions, as well as voice interconford shakedown had shown that it w	epts on more than fre vas effective as a collector,	quencies. Although the its tasking had not been	(b)(3)-50 USC 40 (b)(3)-18 USC 79
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Although Cuba is geographically a close neighbor of the United States, current and detailed maps and charts were not available, especially in the volume required for daily use by analysts. NSA made a vigorous effort to expand its collections of maps, charts and gazetteers. They were obtained from several federal agencies and private organizations.

Also, because of the apparent growing need to provide analysts with the most detailed and current information on Cuban place-names, a project was started in October 1960 to compile an NSA gazetteer of Cuban places gathered from 300 maps and 700 hydrographic charts. By June 1962 this laborious task had resulted in the compiling of some 38,000 Cuban place-names, which were individually keypunched into a data file. This file was of great value to analysts later in their efforts to identify and validate the specific sites of the Soviet medium-range ballistic missiles (MRBMs) and surface-to-air missiles (SAMs) and other Soviet military installations in Cuba during the crisis.

Another task concerned the acquisition of Cuban open-source materials. One of the first anti-American actions taken by Castro immediately following his accession to power was the termination of American subscriptions to Cuban open-source publications. This action curtailed NSA's access to these documents, which had been useful to the analysts. By June 1961 NSA had arranged through the Office of Naval Intelligence for the acquisition of newspapers and other periodicals via Navy sources at the Guantanamo Bay Naval Base. Later, other sources were developed that maintained the flow of open-source information, to include some hard-to-get periodicals. <sup>15</sup>

As a result of all these hearability tests and in-house efforts, by the last quarter of 1961 NSA was in a position to make specific recommendations to the secretary of defense for a dramatic increase of SIGINT efforts against Cuban targets. In late November a key memorandum was forwarded by the director of NSA to the secretary of defense, subject: Improvement of Signals Intelligence (SIGINT) Effort Improvement Improvement of Signals Intelligence (SIGINT) Effort Improvement Improvement Improvement Improvement Improvement Improvement

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	intercept positions at Vint Hill	
	Farms Station (Virginia); diverting the USS Oxford from its scheduled	
	mission to Cuban tasks; and developing a coverage-drop plan (dropping coverage of	
	targets of lower priority in order that those collection/processing/analysis assets could be	
	applied to Cuban targets). By 7 December 1961 these recommendations were approved by	
USC 403 . 86-36	the secretary, and the actions had been taken. Two weeks later, in a related action, the	(b)(d)
	director authorized the immediate transfer of some people in the PROD  Organization (P) to the Latin American problem.	(b)(1) (b)(3)-P.L. 86-36
	NSA and the Cryptologic Agencies were not the only organizations preparing for	•
- ' '	increased efforts on Cuban targets. CIA and related intelligence agencies also were	
•	greatly expanding their activities in that direction. By the end of 1961 CIA had increased	
	its U-2 overflights of the island, a source that ultimately provided key information to the	
	president and his advisors. CIA also started a program to fully and yet most cautiously	
	exploit information gathered from Cuban refugees. This source, in the months that	
	followed, provided enormous files of data, much of which was of doubtful value.	
	By early 1962 the several implementing actions in the intelligence community's plan	
	for augmented intelligence-gathering from Cuba were moving forward with growing	
,	momentum. <sup>17</sup>	•
	In March 1962, Mr. John McCone, director of Central Intelligence, was able to forward	
	to Mr. McGeorge Bundy, the president's advisor for national security affairs at the White House, a list of some sixteen steps taken to provide intelligence support concerning Cuba.	-
	The report to the White House included a statement that " Extensive discussions have	
	been held with NSA personnel that should lead to a substantial increase in the support	
	given by NSA to various DDI (ClA's deputy director for Intelligence) components	
	concerned with Cuba."18	
	In recalling the several actions through 1960-61 of the intelligence community to	
	improve its ability to monitor and report on the so-called Cuban "build-up," it should be	
	remembered that the enormous build-up support being provided Castro was not	
	exclusively military or paramilitary equipment and supplies; it included significant	
	economic support. That support was not provided exclusively by the Soviet Union. As	- h)(1) /
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Despite all these dramatic actions throughout 1961 and 1962 by the Soviets and their satellites to provide increased aid to Cuba, the big decision – to provide sophisticated offensive weapons to Cuba – apparently was not made until sometime in the spring or summer of 1962.

This decision should be viewed in the context of the public statements by Khrushchev on 2 January 1961: "What is more, they [the Americans] are trying to present the case as though rocket bases of the Soviet Union are being set up or are already established in Cuba. It is well known that this is foul slander. There are no Soviet military bases in Cuba. . . ." After the Bay of Pigs fiasco, Khrushchev again reassured the president in a note of April 1962: "As for the Soviet Union we have stated on many occasions and I am stating again that our government does not seek any advantages or privileges in Cuba. We do not have any bases in Cuba, and we do not intend to establish any."

Whatever the intent of Khrushchev's statements, the fact is that SAMs were soon being boxed for shipment to Cuba, and even more sophisticated offensive weapons, MRBMs, were soon being prepared for shipment.

The shipment, unloading, land transport, installation, and command of the missiles sent to Cuba remained entirely under tight Soviet control. At the proposed missile sites, Cuban farmers were arbitrarily evicted from their lands. Soviet troops guarded the missile construction areas around the clock – from the Cubans. The Cubans were also excluded from the dock areas. All this effort was to ensure the security of the operation, to ensure that the Americans were unaware of what was going on, that is at least until the MRBMs were in place and ready to provide a here-and-now threat to the United States. Credit must be given to the Soviets for having been almost successful in this difficult task despite the zealous efforts of the American intelligence establishment.<sup>21</sup>

In the spring and summer of 1962, while the Soviet military was clandestinely installing offensive weapons and their related support systems in Cuba, the American intelligence establishment, armed with high-level authorizations, was implementing several programs to enhance its intelligence collection and processing capability. At NSA, a number of "Cuban Augmentation" tasks were accomplished. For example, in March the Agency hired and cleared some people (in itself a heroic accomplishment!) who had

(b)(3)-P.L. 86-36

)(1)	(b)(3)-P.L. 86-36	capability was now available:	(b)(1)
)(3) GA	CIA ·	To transcribe the expected increase in traffic intercepted from Cuban  NSA organized Project	(b)(3)-50 US0 (b)(3)-18 US0 (b)(3)-P.L. 86
		so-named because it was to be housed in an abandoned Fort Meade hospital	
	and the second s	building started business on 2 May 1962 using semicleared Spanish	
)(3)-P.	1. 86-36	voice transcribers on-loan from the U.S. Air Force Security Service (USAFSS) and	
	- The Control of the	USASA. Eventually, by mid-August, reached a maximum personnel strength of	
		transcribers.28 Efforts were made to complete the clearance process for	
		personnel sent to many of these linguists received their clearances in time to	
		provide support during the crisis and post-crisis periods.	
	•	To supplement the existing positions at the various fixed collection sites, e.g.,	(b)(1) (b)(3)-50 US
		strenuous efforts were made to improve and expand their	(b)(3)-50 US (b)(3)-P.L. 86
		technical capabilities. At NSA-Fort Meade, a van was, in a matter of weeks, equipped	" //
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		As detailed earlier, the voyages of the USS: Oxford and had all	
		proved that shipborne intercept platforms were very productive in collecting a variety of	
		signals, especially signals that emanated from Cuba and	
	•	that were not hearable from fixed stations. By May, two related recommendations with	
		respect to shipborne intercept, which had been made to Deputy Secretary of Defense	
		Roswell Gilpatric, were approved. One proposed the temporary diversion of the Oxford	
		from its scheduled targets in order that it could be tasked to collect	entranta de la companya del companya de la companya del companya de la companya d
		Cuban signals, especially signals. The other proposed that NSA lease a Liberty	(b)(1) (b)(3)-50 US
	•	ship from the Navy's Military Sea Transportation Service (MSTS), install on a priority	(b)(3)-18 US
	· .	basis an appropriate intercept package, and get the ship on station as soon as possible. In	(b)(3)-P.L. 8
		response to the first recommendation, the Oxford was equipped by NSA with two	1.
		additional positions. In the months that followed, these additional positions	<i>/</i> .
		provided NSA with most of the data collected from Castro's	
		system. <sup>25</sup>	•
		In response to the second recommendation to Gilpatric, NSA's collection facilities	•
		office proceeded to negotiate with MSTS for a second ship—the USNS Muller.	
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	(b)(1)	The previous July (1961) NSA had been tasked by the DCI to prepare proposals for additional coverage beyond that which might be provided by the	

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Oxford. Because of the extended lead time and high cost required to ready another ship for a SIGINT mission similar to the Oxford's, as an alternative it recommended the leasing of a WWII mothballed Liberty ship from MSTS on an annual contractual basis. The old ship was refurbished and equipped by NSA and its electronics subcontractors for the mission. In the rehabilitation effort, NSA used the "quick and dirty" approach to ship modifications and electronic installation rather than the sophisticated, orderly, professionally finished and time-consuming approach used by the Navy for the Oxford. The result was that the Valdez was able to set sail only five months later, in November 1961. While its system installation was less than first class (its	(b)(1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36
communications system was held to the mast with baling wire), the ship did get on station in record time, and at a very cheap price (\$3.3 million in contrast to \$13.3 million for the Oxford). Thus, when the Cuban requirement developed, NSA had had some experience with the outfitting of a Liberty ship for its seaborne intercept missions. Dollars and valuable time could be saved by using this approach.	
As with the Valdez, the Muller was to be leased from MSTS on a per diem basis (about \$3,000 per day), operated by a civilian crew and captained by a civilian master. Routine operational and technical control of the ships was to be the responsibility of DIRNSA (actually performed by the old C Group based on the recommendations of the tasking groups, A Group and G Group). The manpower in the "Research Operations Detachment" aboard each ship was to be provided by U.S. Naval Security Group (USNSG) and USASA (the Muller, once it became operational, had about civilians operating the ship and military staffing the "Mil Det").	(b)(1) (b)(3)-P.L. 86-36
Based on NSA's order, in the summer of 1962, as a matter of priority, MSTS contracted with the Higgins Shipyard in New Orleans to de-mothball and rehabilitate the Muller. NSA engineers and technicians had the task of installing the electronic collection packages as a matter of utmost urgency. The priority for Cuban collection was felt in all areas of operation at that time. During the latter months of the summer, as the Cuban build-up caused increasing concern in high government circles and while work on the ship progressed at an agonizingly slow pace in correcting serious deficiencies in the Muller's mechanical systems, the Oxford went about its new collection tasks in the Caribbean Sea circumnavigating Cuba. <sup>28</sup>	
All these "Cuban Augmentation" efforts were not exclusively confined to NSA, NSG and ASA. The Air Force Security Service also had a significant role to play. In the spring of 1962, NSA requested an in-flight hearability test be made over the area using an ACRP aircraft. In June a STRAWBRIDGE (C-130B) aircraft was obtained to perform the test. It collected Cuban voice communications. Those tape recordings made during the flight were delivered to USAFSS Headquarters in San Antonio for processing and later use in transcriber training. Subsequently, an ACRP C-130A aircraft was obtained from and in the latter days of June,	(b)(1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36
gircraft carried intercept positions. Later an additional ACRP C-130B was flown in Maintenance crews, intercept operators and transcriber airmen, especially those with Spanish language skills, were selected from various USAFSS units	(b)(1) (b)(3)-P.L. 86-36

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around the world and flown to Missions with the ACRPs operated from	(b)(1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36
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By the end of August, the ACRP support organization of USAFSS was in	(b)(1) (b)(3)-50 USC 403
operation as a "provisional detachment." It achieved permanent status by October 1962.	(b)(3)-P.L. 86-36
It was the that published the alarming product report on	
10 October, based on data collected during the 9 October ACRP mission. The report noted	/
that data collected from the Cuban Air Force on the 9th differed significantly from those	
collected the previous June.	
By the end of summer 1962, NSA's expansion plans for Cuban collection, processing,	
analysis and reporting were moving forward at an increasing pace. One has only to note	
that in April 1960, when there was little intelligence interest in Cuba, the total number of	
analytic and reporting personnel working on the Cuban problem totaled only people.	(b)(1)
By April 1961 (the month of the Bay of Pigs invasion), the NSA complement had increased	(b)(3)-P.L. 86-36
During the remaining months of 1961, as the Cuban military buildup caught	
the attention of top government authorities, there was a gradual increase in this number	
until it reached by April 1962. There followed a most rapid escalation of	
these capabilities as presidential interest became centered on Cuba. By 14 October 1962,	
the day before intelligence verified that MRBMs were in fact being installed in Cuba,	
there were people working directly on the Cuban problem in NSA. Further, as	
outlined above, throughout the eighteen months immediately preceding the crisis, NSA	
performed a variety of hearability tests and took a number of direct or related follow-up	21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
actions to expand dramatically the capabilities of the SIGINT system	(b)(1). (b)(3)-50 USC 403
	(b)(3)-P.L. 86-36
	<b>/</b> .
It should be noted that this coverage did not include the intercept capabilities of the	•
USNS Muller. Because of unforeseen mechanical difficulties in preparing the ship for sea	
duty, it was not able to be on-station at the time of the October crisis. The job encountered	
so many problems that a SIGINT package had to be installed on the	(b)(1) (b)(3)-50 USC 403
temporary measure in order that the Oxford, which badly needed some shipyard repairs,	(b)(3)-P.L. 86-36
temporary measure in order that the Oxford, which badly needed some shippard repairs, could be taken off-station the following March 1963. The Muller's on-station SIGINT	
could be taken off-station the following March 1963. The Muller's on-station SIGINT service didn't begin until April 1963 – six months after the crisis. <sup>29</sup>	
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defense, McGeorge Bundy, presidential advisor for national security affairs, and others,

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had no verifiable knowledge in the summer of 1962 that Castro was allowing Khrushchev to install medium range ballistic missiles in Cuba.

It is frequently noted that those authorities in CIA who were responsible for preparing the national intelligence estimates were using conventional wisdom in their evaluation of such a prespect. It was their accepted view that Soviet past performance, good logic and reason did not at all suggest that Khrushchev would take such provocative action. In support of that view, Khrushchev had provided periodic reassurances to the United States, in the strongest possible language, that nothing of the sort would be done.

Robert Kennedy, in his account of the Cuban Missile Crisis, quotes a conversation he had with Soviet ambassador Dobrynin in Washington in September 1962 (about four weeks before the missiles were photographed by a U-2): "He told me I should not be concerned, for he was instructed by Soviet Chairman Nikita S. Khrushchev to assure President Kennedy that there would be no ground-to-ground missiles or offensive weapons placed in Cuba." Also, on 11 September 1962 Moscow authorities publicly announced that there was no need for nuclear missiles to be transferred to any country outside of the Soviet Union, including Cuba. 30

In a discussion of the Soviets' extraordinary security measures, a report of the National Indications Center of 15 July 1963 stated, "It is noteworthy, even for the USSR, that there was not a single known leak through the Soviet or Satellite channels of the true nature of Soviet shipments to Cuba, that security restrictions on the movement of equipment and troops into and through Soviet ports were so rigid that no information has ever been obtained on them, and that, although thousands of Soviet troops were deployed in Cuba, there was no discernible reflection of this in communications and no leaks through operator chatter, except for a few references in mid-September to a call for military 'volunteers' for Cuba."

Despite the lack of hard evidence, John McCone, the recently appointed DCI, had misgivings about the Cuban military buildup, and he opined that it may have an offensive purpose. This was contrary to the opinions of his most experienced intelligence professionals. McCone believed the Soviets were up to something more significant other than merely providing improved conventional weaponry to the Cubans in order that they might fend off another possible invasion similar to the "Bay of Pigs." His reasoning seemed simplistic to his advisors, but it was eminently pragmatic, for it was based on simple geography. For the first time, he reasoned, the Soviets had access to a piece of real estate within easy reach of the United States. As it turned out, McCone's gut feeling and logic proved correct. On 15 October, McCone was at the funeral of his stepson in Seattle when he received a long distance call from his CIA office in Washington. The caller told him that he had been correct, and everyone else in CIA was wrong. CIA finally had collected hard evidence that the Soviets, contrary to all the official and unofficial assurances by Khrushchev, were busily installing a number of MRBMs at various sites on the island. There was no doubt about it. Hard evidence was in hand.

the thirteen days of crisis			
Aug. 29, 1962	U-2 fly-over of western Cuba produced the first photographi evidence of SAMs installed in position. Eight SAM sites identified.		
Sep. 4, 1962	JFK aware of arrival in Cuba of SAMs		
Sep. 8–15, 1962	MRBMs moved into Cuban ports		
Oct. 14, 1962	U-2 flight photographed Cuban missile installations		
Oct. 15, 1962	Discussion of readiness measures		
Oct. 16, 1962	Irrefutable evidence of missiles in Cuba - U-2 photos		
Oct. 22, 1962	JFK's speech to the nation that he was imposing a "quarantine"		
Oct. 23, 1962	"Interdiction Proclamation"		
Oct. 26, 1962	First message from Khrushchev		
Oct. 27, 1962	U-2 shot down over Cuba – "Peak of Crisis"		
Oct. 28, 1962	Khrushchev's compliance with U.S. demands		
Nov. 10, 1962	Completion of withdrawal of 42 missiles		
Nov. 19, 1962	Castro agreed to removal of bombers (IL-28s)		

The hard evidence had come from photographic intelligence obtained by U-2 reconnaissance missions over Cuba. [Ed. note: The background of the reconnaissance missions over Cuba is a fascinating but complicated one. It is ably treated in Dino A. Brugioni, Eyeball to Eyeball: The Inside Story of the Cuban Missile Crisis (New York: Random House, 1991). Mr. Brugioni, as a senior official of the National Photographic Interpretation Center, was a participant in the missile crisis. His account blends his own recollections, open-source literature, the memories of other participants, and recently declassified documents.] The aerial photographs obtained on the flight of 14 October 1962 provided the conclusive evidence that was ultimately shown to the president and his advisors. It was that information and intelligence gathered from subsequent U-2 aerial photographs of the various MRBM sites then under various stages of construction on which the president had to develop the U.S. policy and response.

Based on this evidence, the Executive Committee (EXCOMM), composed of the president, National Security Council members, and other senior advisers, had to struggle

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in all-day and late-hour sessions during the next thirteen days to develop for him an appropriate diplomatic approach to Khrushchev. The U.S. action, subsequently developed, would, they hoped, avoid war and yet remove the Soviets' nuclear threat to the United States – a threat only ninety miles from the U.S. coast. It was a complicated problem involving not only the Cuban missiles but the U.S. presence in Berlin and the U.S. missiles in Turkey.

In retrospect, the issue of importance as it relates to this crisis is the intelligence community's ability, or lack of it, to recognize at an early date the crisis indicators. Why was the missile threat not recognized in July or August? The community would respond that there were a variety of indicators collected up to 14 October 1962 through SIGINT and CIA intelligence efforts. Some indicators suggested something of the nature of the Khrushchev venture; others did not. But none of them provided any conclusive evidence of the sort appropriate for the president to take affirmative action. Some examples will illustrate:

he sort appropriate	for the	president	to take	allirmative	action.	Some examples	Will

- CIA contacts picked up comments by a Castro aide that "We will fight to the death and perhaps we can win because we have everything including atomic weapons." In fact, the truthfulness of that statement is in doubt. The Soviets kept all of the MRBMs under their control at all times. Cubans were not allowed on the sites. And there is some doubt that any nuclear warheads for the missiles ever arrived in Cuba.<sup>37</sup>
- Plain language Russian voice shipping communications intercepts by SIGINT
  collectors indicated large increases in the number of Soviet cargo ships involved in
  the Cuban trade, but the mention of their specific cargoes was conspicuously
  absent, and the schedules were obviously falsified.<sup>38</sup>
- SIGINT intercepts on a variety of links detailed items being shipped to Cuba from
  Soviet Bloc countries, e.g., Poland, Hungary, Romania,
  Czechoslovakia, etc., but none of the items suggested anything more than
  economic aid or conventional weaponry.

(b)(3)-50 USC 403 (b)(3)-P.L. 86-36

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	(b)(1)/ (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
<ul> <li>Aerial photography at the end of August showed eight SAMs had been installed by the Soviets.<sup>41</sup></li> </ul>	<b>_</b>
The current best guess is that MRBMs did not start to arrive in Cuba until 7 September 1962. Some analysts believe that the president's order to mobilize 150,000 reservists led the Soviets to believe that the U.S. intelligence establishment had just discovered the missiles, which probably had just arrived in Cuba. Therefore, in response	
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The missiles'	<b>_</b> ^ /
presence in Cuba was subsequently verified by U-2 on 14 October.	
The volume of SIGINT produced during the eighteen months preceding the thirteen-day October 1962 crisis was enormous. Interpreting these data in a manner that would produce a conclusion that missiles were in Cuba is not so easy. To get a feel for the kinds of information that SIGINT was producing, one should skim the following sampling of significant product reports:	
30 April 1962	
"ELINT surveillance of Cuba during the past six months revealed a steady increase in number of Soviet radars operating on the island." Report contained estimate of number of radars and type located in Cuba."	
2 May 1962	
"Dry cargo shipment to and from Cuba in Soviet ships"; reported 43 voyages carrying 228,000 tons of cargo in first quarter. 45	
16 May 1962	
17 Nov. 1069	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36

"Additional items of Soviet aid to Cuba include 5,150 trucks, 850 tractors, 30 refrigerator trucks, 57 excavators, 42,000 tons of bars and food products."47

29 May 1962

17 May 1962

Recapped first uses of Soviet communications procedures for radio and PVO reporting for pilot reporting, pilot suffixes, callwords, introduction of MiC aircraft. 48

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16 June 1962		
"First ELINT evidence	of presence of Soviet airborne intercept radar in Cuba."49	
22 June 1962		· ,
Estimate of number a	and types of Soviet radars operating in Cuba.50	
24 June 1962		
Listed five ships carry	ying at least 3,335 Soviet passengers en route to Cuba. <sup>51</sup>	
31 June 1962		
less than known cargo	els in Cuba trade were making false port declarations, declaring carrying capacity. Also noted absence of	
		• .
17 August 1962		
ELINT intercepts of So	oviet antiaircraft fire control radar. M	
23 August 1962		
Noted continued incre Some ships on second voy	ease in number of ships en route to Cuba; total 57 since mid-July.	
24 August 1962		N.
"High volume of mess	sages between Moscow and Havana."56	
5 September 1962		
		(b)(1) (b)(3)-50 USC 4 (b)(3)-18 USC 7 (b)(3)-P.L. 86-3
13 September 1962		
Dry cargo shipments tons; listed military cargo	s to and from Cuba in Soviet ships, 48 voyages carrying 253,000 o.58	. •
14 September 1962		· 
		(b)(1)/ (b)(3)-50 USC 4 (b)(3)-18 USC 7 (b)(3)-P.L. 86-30
15 September 1962		_
"First intercept of Sp	oon Rest missile-associated radar in Cuba."60	·.

	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798
September 1962	(b)(3)-P.L. 86-36
	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
September 1962	(5)(5)-1 . L. 60-50
"Suspected operation of Soviet IFF system in Cuba confirmed by intercept of signal om Soviet airborne transponder." **	
September 1962	_
	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
5 September – 2,11,19 October 1962	
"Report total cargo shipments to Cuba in Soviet ships of 151 voyages carrying 099,563 tons of military and technical equipment" 85	
October 1962	•
"Cuban operators apparently have a small Russian vocabulary in order to converse ith Soviet counterparts." <sup>46</sup>	
0 October 1962	
"First indication the Soviet grid system, similar to that used by Soviet loc Air Defense personnel prior to March 1962, was in use in Cuba." <sup>87</sup>	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
l October 1962	
	(b)(1)' (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
That the Soviets were highly sensitive to the need for communications security, articularly from August through October 1962, is indicated by the interception of a	
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	0)(3)-1 12: 00-50
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		(b)(1)/ (b)(3)-50 USC 4 (b)(3)-18 USC 7 (b)(3)-P.L. 86-36

These indicators might have provided evidence of Khrushchev's provocative intentions. However, each of these pieces of information could also have been reasonably explained in view of the general economic and technical help being provided to Cuba at that time by Russia and its satellites

The information need not have been associated with the missile installation project of the Soviets. SIGINT did provide enormous elements of intelligence, but it did not provide that key bit of information that proved beyond any shadow of doubt that missiles were being installed on the island.

The period of the Cuban Missile Crisis is usually defined as the thirteen days of 16 to 28 October 1962. The actual crisis started on Tuesday the 16th, when the president was presented with irrefutable evidence of the presence of MRBMs in Cuba. It was on the 28th that Khrushchev finally agreed to remove them from Cuba. It was during these agonizing days, whon Kennedy and the members of his EXCOMM struggled to develop effective courses of action that would avoid a nuclear war, that reliance was placed on the intelligence-producing agencies for indicators as to what the Soviets, Cubans, Soviet satellites and the rest of the nations of the world were thinking and doing.

To monitor the feverish missile site construction progress during those two weeks in October, the president authorized further U-2 overflights of Cuba. In doing so he was concerned lest the newly installed Russian SAMs be used to shoot them down. (In fact, Major Rudolph Anderson's U-2 was shot down by a SAM on the 27th – the day before Khrushchev acceded to the president's conditions.) During any crisis, communications volumes escalate throughout the world, and they did enormously at that time. The SIGINT system's capabilities were stretched to its limits. But it did provide the vital data that gave the U.S. decision-makers some feel for Soviet responses to the statements of the U.S.

(b)(1)''' (b)(3)-50 USC 403 (b)(3)-P.L. 86-36

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position during that period. Also, it provided information on the reactions of other nations – friend, uncommitted, and potential enemy.

October NSA had received from USN-850 (USS Oxford) and USA-520 (ACRPs) some	(b)(1),"
COORDER THE TAKE TO CETTOR IT OUT TO COORD OF THE STATE O	(b)(3)-50 USC 403 (b)(3)-18 USC 798
From these data,	(b)(3)-P.L. 86-36
analysts had to select the key information of intelligence value. With these kinds of	
volumes before 15 October, it is little wonder that the NSA and transcribers were	(b)(3)-P.L. 86-36
very busy people, especially during the subsequent two weeks of the crisis. 70	
The state of the s	<b>1</b>
and the Control of th	
communications for the Soviet Naval Force,	and the state of t
and it also noted that Soviet ground forces were	(b)(1)
ft is	(b)(3)-50 USC 403 (b)(3)-18 USC 798
assumed that the Soviets realized that the U-2 that overflew the San Cristobal MRBM site	(b)(3)-P.L. 86-36
the day before (14 October) would have finally blown the best of the Soviets' security	
measures, and of course it did. <sup>71</sup>	
When the president had first become aware of the missiles on Tuesday, 16 October,	•
and had convened the EXCOMM, he gave orders for the maintenance of very tight security	•
within the confines of the EXCOMM with regard to the crisis. He did not open the issue to	••
departmental discussion or to the public until the following Monday, 22 October.	
However, SIGINT reported	(b)(1) (b)(3)-50 USC 403
on the 16th, 20th, and 21st. SIGINT reported the	(b)(3)-18 USC 798 (b)(3)-P.L. 86-36
	(5)(6) 1 12: 66 66
A charting of the Soviet communications volumes before,	_
during and following the two weeks of crisis shows ups and downs that are similar to stock	
market charts before, during and after the October 1929 "crash." SIGINT reported	
	(b)(1) / (b)(3)/50 USC 403
	(b)(3)-18 USC 798 (b)(3)-P.L. 86-36
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We have made of the second of	

The two weeks of 16 through 28 October were ones in which the world was on the brink of nuclear war. The situation called for the most carefully considered diplomatic actions. The highlights of those weeks were the president's convening of the EXCOMM on Tuesday the 16th; his speech to the nation on Monday the 22d; his Proclamation of Interdiction on Tuesday the 23d; and, following several official and nonofficial messages from the Soviet government and Khrushchev (which were not necessarily consistent), the welcomed

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message from Khrushchev on the 28th in which the Soviets finally agreed to remove the missiles from Cuba. In the days that followed occurred what might be called the world's greatest "sigh of relief." Not only had the real possibility of a nuclear holocaust been avoided, but Khrushchev's objectives had been frustrated: he did not succeed in forcing the Western Allies out of Berlin; he did not force a treaty of peace with Germany counter to the purposes of the democracies; he did not gain that leverage over the United States that apparently was the broad purpose of the whole Cuban missile effort.

apparently was the broad purpose of the whole Cuban missile effort.	
The fact is that the U.S. policies did cause a significant amount of friction betwee Soviet government and the Castro regime. The purpose of the president and his EXCO was to formulate a plan that would remove the missile threat to the U.S. and at the time provide the Soviets with some face-saving options for their propaganda purp Most would agree that those objectives were reached. The choices selected by the government to achieve these goals are still being debated by informed people who positions of high responsibility at that time. Regardless of what might have happened choice of options and their implementation did, in fact, work. Another world was averted. SIGINT reflected this relief of tensions around the globe. An intercented me	omm same coses. U.S. held d, the
	·
	April 1
That bit of SIGINT information, insignificant as it may seem in isolation, well deserted the satisfactory conclusion of the most serious world crisis since the close of WWII.	(b)(1) (b)(3)-50 USC 403 (b)(3)-18 USC 798 (b)(3)-P.L. 86-36
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(b)(1) (b)(3)-50 USC 403 (b)(3)-P.L. 86-36

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